

ABSTRACT

An accelerator composition for use with sprayed cementitious compositions, which is an aqueous solution or dispersion of a blend of the essential Components 1-3

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Component 1 - aluminium sulphate

Component 2 – at least one of an alkanolamine and an alkylene diamine or triamine

Component 3 - hydrofluoric acid

10 optionally with at least one of Components 4-7, with the proviso that at least one of Component 4 or Component 5 be present:

Component 4 - at least one of sodium hydroxide, potassium hydroxide, lithium hydroxide, magnesium hydroxide, lithium carbonate, sodium carbonate, potassium carbonate,

15 magnesium carbonate, sodium sulphate, potassium sulphate, magnesium sulphate and lithium sulphate;

Component 5 - $C_1 - C_{10}$ aliphatic mono- and dicarboxylic acids and their metal salts;

Component 6 - aluminium hydroxide;

Component 7 - at least one of phosphoric acid and phosphorous acid.

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The accelerators have excellent long-term stability and work well with “difficult” cements, such as some Japanese OPCs.